Transforming Nephrology

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Clin J Am Soc Nephrol 13: 331–334, 2018. doi: https://doi.org/10.2215/CJN.02310317

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Much has been written about the troubles facing nephrologists and the specialty of nephrology. These include declining interest in nephrology as a career, lower salaries compared with many other subspecialties, difficulty attracting outstanding residents who are passionate about nephrology into fellowship programs, and high rates of burnout and career dissatisfaction among practicing nephrologists (1,2). There is no doubt that the work of a nephrologist can be hard. Many of us, whether in academia or private practice, work long hours caring for challenging patients. Some work within health systems where our efforts are perhaps not as appreciated as we would like. Similar to other areas in the practice of medicine, nephrologists spend substantial time during their workdays, evenings, and weekend on tasks that have little meaning, such as completing forms, ticking boxes in the electronic medical record (EMR), and other tasks that do not effectively use our clinical training. For instance, a study focusing on four specialties (nephrology was not included) determined that clinicians spend only 27% of their total time on direct clinical care and 49.2% of their time on EMR and clerical work, with much of this time occurring after hours during personal time (3). This issue may be worse for nephrologists, who typically have to use several different EMRs at multiple clinical practice sites, including chronic dialysis facilities. Furthermore, many nephrologists spend hours traveling between multiple dialysis units, seeing patients in facilities owned by large for-profit dialysis companies where our contributions to patient care may not be highly valued. Compounding this are reforms on payment models that emphasize data reporting and increase the burden of documentation rather than encouraging patient-centered care. There is no wonder that many of us feel discouraged and burned out. A consequence of these feelings is that nephrologists have developed a cynicism regarding our profession and a feeling that things are only going to get worse. This cynicism leads to a destructive self-fulfilling prophesy that engenders a sense of helplessness. Our professional dissatisfaction is transparent to medical students and residents who are deciding on career choices and likely acts as a deterrent to choosing careers in nephrology. It is against these feelings that we believe it is critical for us to take a step back, ask why we chose nephrology as our specialty, and consider how we can recapture joy and excitement in our practice of nephrology. Perhaps most importantly, we need to take the necessary actions that will be required to accomplish this. This article focuses on these critical issues and offers a starting point to engage further discussion on the future of nephrology.

Many of us chose nephrology out of fascination with the complex physiology underlying our specialty and an enthusiasm for improving the lives of patients with serious medical problems (4,5). In recent years, this enthusiasm has been tempered by factors that have changed the face of nephrology practice. Particularly problematic for many are the corporatization of dialysis facility patient care and the increasing encroachment of other specialists into our space—hospitalists, intensivists, rheumatologists, and others who believe that they can practice nephrology as well as we can. In addition, innovative and clinically impactful discoveries in nephrology have lagged behind nearly every other subspecialty in part, at least, due to inadequate funding of kidney disease research (6). An American Society of Nephrology (ASN) analysis revealed that only the equivalent of 1.7% of the annual total cost of care for kidney failure is invested in research to improve therapies and discover cures. Certainly, medical students and internal medicine residents see the void of exciting new treatments for kidney diseases when they contemplate nephrology versus oncology, hepatology, cardiology, and other fields.

Despite our struggles as a specialty, we believe that great opportunities remain to recapture the vibrancy of nephrology. We propose a series of measures that we believe can lead to meaningful improvement in the professional lives of nephrologists. These measures (Tables 1 and 2) can be divided into those that focus on fellowship training, practice transformation, creating a stronger community of nephrologists, stimulating the cognitive aspects of practice, and enhancing the clinical scope of practice of nephrology. Practice transformation borrows heavily from innovations that have been well described in other specialties (7). These measures are largely within our control but do not negate the need for nationwide reforms in many areas, which we will not discuss here. Underlying all of this is the realization that nephrologists need to recapture our critical sense of value and mission of being dedicated to providing compassionate patient care of the highest quality while translating new knowledge into meaningful improvements in health care outcomes for patients with kidney disease. To us, the joy in practice comes when we have meaningful interactions with

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Table 1. Measures to improve and transform nephrology practice

Practice Change	Description	Example of a Current Problem That Would Be Addressed
Previsit planning and previsit laboratory testing	Goal: increase the value of the face to face clinic visit, minimize postvisit work, and give patients direct feedback in person	Excessive time-managing results and postvisit phone calls/documentation Nephrology practices define what laboratory work is needed before consult visit
Development of multidisciplinary care teams with expanded roles and responsibilities of nurses, medical assistants, and other staff. Roles and responsibilities are clearly delineated. Physician extenders (PAs and NPs), for some practices, are critical in these teams	Goal: better distribute the work of caring for patients and develop a team that has responsibility for managing the patient	Patients have ongoing needs for care coordination, prescription drug management, health care coaching, and education (such as ESRD education). This is especially important for patients with advanced CKD who have multiple care needs
Minimize documentation and time on regulatory requirements through the use of scribes and better use of EMR tools (standardized text and order sets)	Goal: decrease the burden of EMR documentation by using tools and scribes to ensure that all documentation is completed during the patient encounter	Excessive time devoted to EMR use, which adds little value to patient care and impinges on personal time out of the office Nephrology practice sites should harmonize EMR use and operability
Development of improved office work flow with standardized processes	Goal: decrease the chaotic nature of practice through improved team work, clear roles of staff	Excessive time spent reworking the system for such tasks as preauthorization for prescriptions
Reduction in unnecessary physician work	Goal: maximize the time that physicians spend in direct patient care	With EMR implementation, tasks that had, in the past, been performed by receptionists, nurses, and pharmacists have been relegated to physicians. Nephrology practices can better define workflows and responsibilities within the care team

PA, physician assistant; NP, nurse practitioner; EMR, electronic medical record.

trainees, patients, and colleagues and when we feel engaged in improving the human condition.

Fellowship Training

There is an urgent need to reinvigorate and redirect the focus of nephrology fellowship training. This is necessary to ensure that those who complete training are highly skilled across the spectrum of the field as well as prepare trainees for the modern practice of nephrology. The gross mismatch between the number of applicants for nephrology fellowship training and available high-quality, comprehensive training programs is a serious problem that needs to be urgently addressed. There are too few applicants who are genuinely interested in nephrology and too many training programs given the declining number of highly qualified candidates. We are also concerned that too many programs are unable to provide comprehensive training across the full spectrum of the science and clinical practice of the field of nephrology. Nephrology as a discipline is steeped in physiology, pathophysiology, and pharmacology. Training must occur in an environment that emphasizes these core principles and provides fellows with the skills necessary to enter the workforce with expertise that is valued by others and that distinguishes nephrologists from practitioners in other specialties. If fellowship programs cannot provide trainees with the requisite scientific and clinical knowledge and clinical and procedural skills necessary to practice independently and with real expertise across the specialty's entire spectrum, our entire specialty loses. We need to envision dramatic changes to fellowship training with a stronger focus on education—both scientific and clinical—over service and greater flexibility to adapt training experiences to trainee interests (such as elective training in critical care, interventional nephrology, topics in oncology, and others). All of our fellows also need meaningful personal experience with all dialysis modalities.

Practice Transformation

The premise is simple: the burdens of everyday practice and the use of the EMR have negatively affected professional satisfaction. This is not unique to nephrology,

but many nephrologists have a unique challenge. Nephrologists work in many different practice settings from academic groups to large multispecialty practices to solo practice, often in more than one hospital and various outpatient chronic dialysis settings, forcing the need to become skilled with multiple EMRs.

We outline some steps (Table 1) that can help maximize physician time, reduce waste, and allow physicians to see and feel the effect of their work on patient outcomes. This work is not easy and requires effort and financial investment to implement. Data from primary care practices using such strategies have shown improvement in physician satisfaction (7). Some of these steps are simple and relatively straightforward, such as ensuring previsit planning and laboratory work. Others require significant process redesign and creation of teams with clear roles and responsibilities that are specific to a given practice and its setting. A focus must be on decreasing the demands of documentation. It is also essential that companies that own dialysis facilities work quickly to integrate their EMRs with hospital and office systems, because this will improve both patient care and efficiency of practicing nephrologists. Ideally, there would be a single unified EMR that interfaces with commonly used office and hospital EMRs that is used by all dialysis providers.

Judicious use of scribes or clinical assistants may be of great benefit. Scribes help physicians with EMR navigation, retrieval of diagnostic results, documentation, and coding. This allows the physician to free up time for patient care. This has been a rapidly growing trend, and although there were approximately 20,000 scribes employed in the United States in 2014, this number is expected to reach 100,000 by 2020 (8). Available evidence suggests that scribes may improve physician satisfaction, productivity, and efficiency and that the additional practice costs may be offset by gains in revenue (9). Scribes could also be effectively implemented within the dialysis unit to lessen the burden of documentation and maximize face to face time with patients. As such, we strongly recommend that dialysis organizations provide scribes for nephrologists seeing patients in their facilities.

Transforming practice also encompasses having nephrologists embrace and lead new care models, such as those that focus on creating value for the patient and health care system throughout the continuum of CKD care. In many respects, nephrologists have been among the physician leaders in championing multidisciplinary, value-based care, and trainees interested in public policy and health care transformation would find a welcome home in nephrology. Skills to practice this type of medicine must also become part of fellowship training.

Creating a Strong Nephrology Community

Nephrologists share common problems and concerns whether they are related to specific patient-related problems or practice management issues. Developing a strong and supportive community of nephrologists is likely to lead to significant benefits (Table 2). These benefits may be practice specific, such as sharing best practices for office management; they may be patient problem focused, such as being able to solicit guidance on challenging patients, or they may be related to forming large networks of practices that can collaborate in research. Research has shown that developing social networks and using internet-based technologies to facilitate these interaction have positive effects on affect, sense of community, and life satisfaction (10). National organizations, such as the ASN, are well situated to facilitate the growth and development of these communities.

Stimulating the Cognitive Aspects of Practice

The underpinnings of nephrology are complex, intriguing, and challenging. In fact, surveys identify the cognitive challenges of nephrology as one of the features that attracts physicians to this specialty (4,5). However, the grind of daily practice can often make the excitement of deeply understanding the physiology and pathophysiology of a patient seem remote and a thing of the past relegated to our time as fellows. For many nephrologists, the daily care of patients on dialysis can become mundane

Table 2. Creating a strong community of nephrologists

Strategy	Method	Example
Sharing best practices for the care of patient problems and managing practices	Social media platforms, such as the ASN Community Forums	Sharing protocols for the management of immunosuppression for patients with lupus nephritis
Development of practice-based research networks to conduct research on processes and outcomes of care	Development of pragmatic trial networks of existing nephrology practices that share data on processes of care and outcomes	Development of networks of 50–100 practices that work together to study practice, especially in areas where no consensus best practice may exist
Networking opportunities to link nephrologists so that questions can be answered and develop support networks	Social media platforms, such as the ASN Community Forum, facilitated networking at regional and national meetings	Development of peer to peer interactions that support one another in clinical practice

ASN, American Society of Nephrology.

and repetitive, particularly when occurring in an environment that emphasizes protocol- and algorithm-driven care. It becomes hard to find the joy in practice when you cannot think about and discuss interesting patients as well as have time to read and investigate new knowledge. Many of us do find time to do this, but others struggle with this. We feel that rekindling this spirit of inquiry and working with nephrologists to cultivate the cognitive aspects of practice are critically important. To do this requires a concerted effort on our part; we need to find the time to read and think about patients and have the ability to discuss our thoughts with our peers. Nephrology training programs are in a unique place to help these endeavors by providing on-demand seminar series to past trainees and access to expert nephrologists in specific areas and by inviting past trainees to continue their participation in educational activities after fellows complete their training. Forums and communities, such as those created by the ASN, are just one example of innovative opportunities for nephrologist engagement with colleagues. Lifelong learning is very satisfying and enhances our ability to be outstanding clinicians as well as role models for future generations.

Expanding the Nephrology Scope of Practice

It is also essential that the specialty of nephrology adapt to the times. In many respects, the scope of practice has changed little over the years and may, in fact, have even contracted in some circumstances. Expanding our expertise will almost certainly increase professional satisfaction. Nephrologists should become experts in more areas of critical care, particularly hemodynamic monitoring and use of bedside ultrasound for volume status assessment. We suggest that other opportunities exist in use of diagnostic ultrasonography, placement of peritoneal dialysis catheters, and ambulatory BP monitoring. Bolder possibilities include caring for patients with renal cell carcinoma and those with nonsurgical urologic problems. Finally, we have to be true experts in all areas of nephrology, and we need to be better at what we do than intensivists, rheumatologists, hospitalists, and others so that they respect our craft. New skills in population management, quality and safety, and primary care delivery may also provide value going forward.

The Imperative

Nephrology is a fascinating field where we care for some of the most complex and challenging patients in medicine. In doing so, we have the ability to positively affect the lives of many patients. However, to maximize this benefit, we must have a vibrant specialty with physicians who love what they do and find joy in their practice. Over the past decades, finding this joy has become more difficult, and the consequences include physician burnout, career dissatisfaction, and the erosion of the specialty. There are other critical issues surrounding compensation for nephrologists that need to be addressed but are beyond the scope of this article. We propose broad initiatives to help nephrologists rekindle the excitement of their first days as fellows and hopefully reinvigorate their practice. These are just a few suggestions among many others, but we hope to start the conversation on how we can support one another to make our specialty shine and most importantly, lead to both career satisfaction and the best outcomes for our patients.

Acknowledgments

The content of this article does not reflect the views or opinions of The American Society of Nephrology (ASN) or the *Clinical Journal of the American Society of Nephrology* (CJASN). Responsibility for the information and views expressed therein lies entirely with the author(s).

Disclosures

M.H.R. serves as the Editor-at-Large for Clinical Practice for the *Clinical Journal of the American Society of Nephrology*, receives research funding from Kadmon Corporation, and has consultancies with Kadence Ventures. J.S.B. serves as the Chair of the Nephrology Board of the American Board of Internal Medicine and the Deputy Editor of the *American Journal of Kidney Diseases*.

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Published online ahead of print. Publication date available at www.cjasn.org.

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